A

# MEDICAL TREATISE

ON

## *The Virtues of Fir-hill Well.*

A

# MEDICAL TREATISE

ON

# The VIRTUES of FIR-HILL WELL,

ILLUSTRATED WITH

## SELECT CASES.

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AUCTORE *J. TAYLOR*, M. D.

SOCIETATIS MEDICÆ REGALIS EDINENSIS SOCIO;

ET

COLLEGII MARISCHALLANI APUD ABREDONENSES

SOCIO ET ALUMNO.

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ALEXANDRO BANNERMAN, Baronetto,

ACADEMIÆ IN VICO ANTIQUÆ

ABERDONIÆ,

MEDICINÆ PROFESSORI AMPLISSIMO,

QUI,

URBANITATE BENEVOLENTIA ET COMITATE MORUM,

" MICAT INTER OMNES."

NEC NON,

GEORGIO SKENE, Armigero,

IN RE MEDICA EXIMIO,

IN LITERIS, PROFECTÓ, NEMINI SECUNDO,

UTRISQUE PLURIMUM DEVINCTUS.

ETIAMQUE

*MEDICIS* NOSOCOMII PROVINCIALIS

DIGNISSIMIS:

DENIQUE,

*CONDISCIPULIS* SUIS SOCIETATIS MEDICÆ,

QUÓD EUM EX SUORUM NUMERO ESSE VOLUERIT,

OPUSCULUM HOC,

DE FONTE MEDICATO PINIFER ABIEMONTANUS DICTO, EJUSQUE VIRTUTIBUS,

SACRUM VOLUERIT,

*AUCTOR.*

EX URBE ABERDONIÆ NOVÆ PRIMO LAPIDE.

# LECTURE I.

.....

*The Origin of Fir-hill Well as a Chalybeate Spring.*

ABOUT the year 1721, John Forbes, in Old Aberdeen, and one of the name of Catto, who is alive at this preſent time in the Spital, in the winter time, when there was a great ſtorm on the ground, they had gone out a ſhooting hares and ſmall birds about the hedges, when, by mere chance, Mr. Forbes obſerved a ſpring of water iſſuing from the bottom of the round hill near the Well; a vapour ariſing from the ſpring, made it more diſcernible. Mr. Forbes had been afflicted with a calculus, or gravely complaint, from his infancy; he drank ſome of the mineral water, and ſoon after was very ſenſible of its giving him eaſe; afterwards, having drank freely of it, he paſſed a conſiderable quantity of gravel and ſmall calculi in his urine; ſometimes he paſſed ſmall ſtones, of the ſize and ſhape of kidney beans. Finding ſo much benefit by drinking the mineral water, he continued this practice ſeveral years. His daughter, who is the

author

author of this narrative, uſed to bring her father the water, which never failed to give him relief, in the moſt violent fits of the gravel, to which he was ſubject as long as he lived. Before the above period, the mineral ſpring had been quite neglected, and unknown as a mineral water. It would be often ſo choaked with mud, that it could not be diſcoverd, but by a red okery ſubſtance, which covered the fountain in its courſe. The ſpring then began to be known, and frequented for various diſeaſes, as pains in the ſtomach, indigeſtion and colic complaints, but particularly for calculous and gravely complaints; which virtues the mineral water ſtill retains. Its medicinal qualities are apparent from the ſubſequent Caſes, hitherto ſubjoined. It is likewiſe found to have a ſpecific virtue in the cure of ſore eyes, which are ſo common, and always gives relief, often a perfect cure.

*Carmen ad Fontem Abiemontanum.*

EULOGIUM on the LADY'S WELL.

THOU beſt of fountains, by all bounteous Heaven,
To eaſe our pains, and cure our ills, wert given:
Of life and health, of joy and love the ſpring,
Our firſt beſt thanks to thee alone we bring.

Of

Of all our fountains, ſurely thou'rt moſt rare,
Nor *Dunſe* nor *Moffat* may with thee compare;
*Penkethland* proud, and humble *Torryburn*,
May juſtly now their faded honours mourn:
Saint *Bernard*'s lofty collonade will tell,
And huge *Hygeia*, goddeſs of the Well;
The dome, the vale, all ſhaded o'er with trees,
The beauteous environs all made to pleaſe.
Away with art, let us with nature rove,
O'er hills and dales, the meadow and the grove;
And, to crown all, the copious chryſtal ſpring
To all our wiſhes joy and health will bring.
See how the old and young in crowds do throng,
Quit their ſoft beds, and merrily trip along,
And, big with expectation, chant a ſong.
Farewell, ſweet fountain; may thy enchanting powers
For ever laſt, whilſt ſun and moon endures!

# GENERAL REMARKS

ON

## *Chalybeate Springs, and Fir-hill Well.*

—*Sanctos ausus recludere Fontes.* VIRG. GEORG. I.

Daring to diſcloſe Nature's ſacred fountains!

## *PREFACE.*

A LARGE volume would hardly be ſufficient to contain what might be written on the compoſition and virtues of Medicinal ſprings. Rain water is allowed to be the pureſt of all elementary fluids; but medicinal ſprings are ſuch as are compoſed of many ingredients beſides the pure element, and theſe ingredients are iron, ſulphur, alum, nitre, and a reſiduum of earthy particles; which laſt is to be found in all mineral waters.

Where iron is the radical or principal ingredient, the ſpring is called a Chalybeate; where ſulphur predominates, it is called an Hepatic; but where the medicinal

medicinal fountain is impregnated with ſalt, it is denominated Muriatic, or Saline. Theſe three ſprings are diſtinguiſhed from one another, by the radical ingredients, wherewith they are impregnated; they likewiſe anſwer different intentions, being ſpecifically adapted for the cure of various diſeaſes; yet all agree in being of a reſtorative nature to the general health and conſtitution of thoſe who uſe them. The virtues of medicinal ſprings may be reckoned a modern diſcovery, unleſs we except the Holy Wells, which were frequented from ignorance and credulity by our anceſtors, but are now ſtopt up and covered. In the northern diſtricts of this country, the chalybeate ſprings prevail; of the other kinds, there are ſcarcely any to be found nearer than *Penkethland* at Perth, *Saint Bernard's Well* near Edinburgh, or *Moffat* near Dumfries. A generic chalybeate fountain is eaſily known, by a ſtyptic ferruginous taſte, like ſmithy water; and when firſt taken from the fountain, a vapour, or ſpecific gas, is perceived very ſenſibly, which it loſes after being expoſed to the air; in which caſe, its medicinal qualities having evaporated, the water becomes effete, and uſeleſs for medical purpoſes. A black ſcum gathers upon the ſurface of a chalybeate; a red okery ſubſtance appears in the water-courſe: the other characteriſtics of a chalybeate fountain will be afterwards noticed in the ſequel of this narrative.

*Aqua*

*Aqua Fontana Mineralis, gelida, pura ſalutifera,*
*Ad Sanitatem integram tuendam, ſaluberrima.*

.....

FIR-HILL WELL is pleaſantly ſituated at the foot of a round hill covered with firs, whence it takes its name. The well has been lately incloſed with a ſtone wall; the water runs from a braſs ſpout, into a ſtone baſon, well ſecured from all extraneous matters. This work has been done, and well done it is, at the ſole expence of a few public-ſpirited Gentlemen, whoſe voluntary contributions do them great honour. Neither ought the aſſiduity and attention of its ſuperintendent and benefactor to be forgotten, by whoſe care the well has been provided with every convenience; a pleaſant acceſs to the well by repairing the roads, and wooden benches for ſeats, to accommodate the company that frequent the well, which is ſituated at no great diſtance from the Old Town of Aberdeen, (now, in its improved ſtate, juſtly accounted one of the handſomeſt villages in the kingdom). The appearance of our well is ſomewhat romantic, environed with pleaſure-grounds, a grove, an hermitage, and the lofty tower of King's College, highly ornamented with

with a ſtately imperial crown. On the other hand, two high pyramids, of a ſingular ſtructure, appear; they belong to the church of Saint Machar, being the remains of an ancient cathedral,—at once exhibiting the relics of the old antiquated religion, and of an enraged mob, who indeed knew not what they were doing: in a word, the whole vicinity may be ſaid to conſummate a perfect ſymmetry of the agreeable and beautiful. To return to our medicinal fountain: We cannot help obſerving, that the Fir-hill Well very much reſembles the chalybeate at Scarborough; the water of both fountains is filtered through a ſloping ſandy hill, having an aſpect to the ſea, diſtant about half a mile; the ſame ſtyptic taſte; the ſame, at leaſt a ſimilar, gas, and other mineral qualities in both. Scarborough well has been frequented more than a century, for indigeſtion and ſtomach complaints; for female weakneſs, and all the diſeaſes ariſing from relaxation, what Boerhaave calls the diſeaſes of a weak and lax fibre. Our well anſwers the ſame deſcription in every particular; it is alſo efficacious and ſucceſsful in removing obſtructions in the urinary paſſages; but its ſalutary effects will beſt appear, from a number of ſelect Caſes, well authenticated by the patients themſelves, and hitherto ſubjoined. This kind of proof is called Synthetic, and gives more ſatisfaction to the public, than a chemical analyſis of the component parts, which, to the generality of readers,

readers, is ſcarcely intelligible. Yet, that nothing may be wanting to a deſcription of this mineral water, and to aſcertain the ingredients wherewith it is impregnated, we have obſerved, that there is a combination of ingredients, wherein iron and vitriol predominate; with an inconſiderable quantity of ſulphur and nitre, and a reſiduum of earthy particles, which takes place in all mineral waters: yet theſe qualities are ſuch, as not to affect their medical virtues. The iron wherewith the chalybeate is impregnated, is of a volatile nature, and flies off by boiling, or by being expoſed to the air, yet ſo as not to loſe its chalybeate quality; and the reſiduum is attracted by the magnet. When theſe ingredients are decompounded, they in ſome meaſure account for the diuretic quality of the mineral water, and its being ſometimes laxative. It is ſomewhat lighter than common water, by ſixty grains in a pound, or one ounce in a gallon. It is diſcoloured by an infuſion of galls; by a ſtronger infuſion, it becomes of an inky colour; when made hot, it curdles milk; it will neither boil peaſe, nor break ſoap, which is the never-failing criterion of a genuine mineral water; when expoſed to the air, it loſes its ferruginous taſte, and its medicinal qualities; it does not diſcolour ſilver,—a proof that the portion of ſulphur, wherewith it is impregnated, is inconſiderable. If the water be drank for indigeſtion, or ſtomach complaints, occaſioned by drinking

tea

tea to exceſs, or by drinking it too hot or too ſweet, which laſt generally leaves an acidity and pain behind it in the ſtomach, or by an habitual uſe of ardent ſpirits, or an intemperate way of living,—in all theſe caſes, the ſalubrious effects of the mineral water are manifeſt, by its reſtoring to the ſtomach and alimentary canal their natural digeſtive powers, whereby they are enabled to reaſſume their natural functions, and the whole ſyſtem is regenerated, and its natural tone reſtored. It is not loading the ſtomach with too great a quantity of the mineral water that will add to its efficacy; it is more adviſable, not to exceed a mutchkin at firſt, and ſo increaſe the quantity gradually; at the ſame time abſtaining from pork, bacon, ſalted fiſh, old cheeſe, water fowl, and ſuch things as are of a hard digeſtion.

Theſe few lines are not meant as an eulogium upon the medicinal fountain—it will ſpeak for itſelf. Our object is, merely to announce to the public, a treaſure which they have in their poſſeſſion; with this further aſſurance, that we often find the productions of our own country more efficacious and ſucceſsful in removing our maladies, than thoſe of foreign and diſtant countries,—being more attemperated to our conſtitutions,—and therefore deſerve the preference.

# SYNTHETIC ANALYSIS,

TO EVINCE

*The Qualities of Fir-hill Well.*

THE virtues of a medicinal ſpring are in nowiſe better exhibited, than by ſelect Caſes of thoſe who have frequented them, and where they have received a perfect cure of the ſeveral maladies, wherewith they have been afflicted, and after they have undergone a long courſe of fruitleſs and expenſive medicament. The following Caſes have been taken down from the perſons themſelves, who have received benefit from our medicinal fountain, without any recurrence of their complaints, being thereby reſtored to perfect health, and become uſeful members of ſociety, without confinement, and without expence or loſs of time.

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# LECTURE II.

.....

## CURES DONE AT FIR-HILL WELL.

### CURE I.

Mr. *John Bothwel*, overſeer at the Battery, being afflicted with a ſtrangury and incontinence of urine,

ſometimes paſſing a rediſh-coloured gravel in his urine like brick-duſt, in large quantities, for which he had applied to ſeveral Gentlemen of the Faculty, and taken abundance of medicines. Finding no relief, he applied to the Hoſpital, where he was ſounded, and for ſeveral days after he paſſed a conſiderable quantity of blood, without any alleviation to his complaint; on the contrary, his pains increaſed, and his health and ſtrength were ſo much impaired, that he could not attend his buſineſs. In this deſperate condition, he was carried to try the effects of Fir-hill Well; he drank the water very freely, which gave him immediate eaſe, and was followed by a diſcharge of an incredible quantity of gravel. Finding ſo much relief by uſing the medical water, he continued the uſe of it until his health was perfectly reſtored, and uſed no other means until he was quite free from complaints; and has ever ſince continued without any return of his diſeaſe. He has attended his buſineſs without any recurrence of his nephretic complaints, and aſcribes his cure entirely to the medical water, having uſed no other means for his recovery. His dwelling is near the Weigh-houſe, but he attends his buſineſs all day at the Battery.

Mr. *Bothwel*, whoſe caſe has been given in the preceding page, gives the following information of *William Urquhart* and *Andrew Duncan*, both reſpectable farmers in Old Aberdeen. They had attended

Fir-

Fir-hill Well, and obtained a perfect cure of their respective complaints, by using the above mineral water, and advised Mr. *Bothwel* to follow their example. *Urquhart*'s malady was a singular case, by which he had suffered long in great distress; upon examination, it was found to be calculous, or a stone in his bladder: by the lithontriptic power of the mineral water, the same was so far dissolved, that he continued ever after free from pain; by using a long course of the medical spring, the stone was so far dissolved, that he felt nothing of it afterwards. We know from experience, that chalybeate springs have often been found to have a solvent quality; this is a singular case, and the only one which has occurred to our information. *Andrew Duncan*'s case was a strangury, and incontinence of urine, of which he was cured by using the above mineral water, and advised Mr. *Bothwel* to follow his example; which he performed successfully, as above narrated. By applying to Mr. *Bothwel*, he will give a satisfactory account to any inquisitive person.

*William Cooper*, confectioner, Old Aberdeen, about fifty, a thin spare man, formerly subject to nervous complaints, and a dry cough, without expectoration; he has often been troubled with a spasmodic asthma, and a difficulty of breathing. After using abundance of medicines, finding no relief, he was obliged to quit

quit his buſineſs, and retire into the country, where, by a change of air and his manner of living, he found his cough and aſthma much alleviated, and his general ſtrength improved greatly. After remaining in the country five years, he returned to town, and followed his buſineſs of a confectioner as formerly. He was but ſhort while in town, when all his complaints returned; he was then adviſed to drink the water of Fir-hill Well: for ſome weeks he found little or no benefit; but perſevering, and rather increaſing his rate of drinking the mineral water, in a few weeks he received a complete cure, and followed his occupation of a confectioner, although a buſineſs very injurious to the aſthmatic: he uſed no medicines during the courſe of his drinking the mineral water. This man's caſe affords a manifeſt proof of the tonic, or ſtrengthening power of the mineral water, by not only reſtoring his health, but ſtrengthening his lungs above their natural weakneſs, and enabling him to follow a buſineſs very unfavourable to breaſt complaints.

N. B. *The buſineſs of a miller, hair-dreſſer, confectioner, and chemiſt, are very liable to aſthmatic and breaſt complaints, and ſometimes they are cured by quitting their occupations, and moving into a purer air, free from any annoyance.*

*Thomas Chriſty*, butcher in Old Aberdeen, a ſtout man, about fifty, generally healthy; he had never obſerved any gravel, ſand, or extraneous matter in his urine, when all at once he was ſeized with a ſtoppage of his water, attended with exquiſite pain, for which he immediately applied for advice. At firſt, he found ſome relief by taking medicines, but it was of ſhort continuance. In this miſerable condition, he was adviſed to drink the water of Fir-hill Well, and ſoon after found himſelf much relieved, paſſing abundance of urine without pain, or any mixture of ſand or gravel. He continued this courſe of drinking the mineral water for a conſiderable time, at the rate of ſix bottles daily; afterwards, finding himſelf in health, and free from pain, he left off uſing the mineral water, and has felt no return of his complaint for many years.

N. B. When the urinary bladder is over-diſtended with urine, it loſes its contractile power, and becomes inactive; hence the ureters, or urinary paſſages, collapſe,—the urine in the bladder ſtagnates,—and regurgitates upon the ureters with excruciating pain. At this critical and dangerous juncture, the mineral water acts with a powerful ſpaſmodic energy, forcing a paſſage through the urethra, and reſtoring the bladder and urinary paſſages to their natural tone and functions. This man having received a perfect cure, has diſcontinued uſing the mineral waters, but retains

a grateful

a grateful remembrance of the benefit he received from them.

CASE VI.

*Jean Harvey*, a young woman aged eighteen, generally healthy, niece to Mr. *Cruickſhank*, at the ſign of the Red Lyon, in the Spital, where ſhe conſtantly reſides; during laſt winter, ſhe was ſo afflicted with ſore eyes, diſcharging a thick viſcid matter, that ſhe could not open them, until they were bathed every morning with warm milk and water; attended with pain, and weakneſs of her ſight, that ſhe could not ſee to work nor read. Being threatened with a total loſs of her ſight, without any advice, ſhe went of her own accord to Fir-hill Well, and drank a chopin of the mineral water, at the ſame time bathing her eyes daily; from this courſe, ſhe ſoon found great relief, and increaſed the quantity, uſing it for her common drink, and having her victuals dreſſed with it. In three months ſhe received a perfect cure, without uſing any medicines or other means whatever.

CASE VII.

*William Kemp*, a gardener in Old Aberdeen, moſtly employed at Mr. *Leſlie*'s, near Powis Bridge, a ſober, honeſt man, whoſe report may be depended upon; he has often been attacked with violent paroxyſms of the cholic, for which he always applies to Fir-hill Well

Well for a remedy, and has never once been diſappointed.

Theſe above-mentioned Caſes are quoted, to give an authentic ſpecimen of ſome of the virtue and qualities of Fir-hill Well, the perſons living agreeably to the directions given along with the caſes reſpectively.

CASE VIII.

Mrs. *A.*, an unmarried lady, aged fifty-three; about the age of fifteen, ſhe was very unhealthy, being afflicted with violent paroxyſms and fits of ſickneſs, with loſs of appetite and vomiting, that nothing would ſtay upon her ſtomach, which reduced her to ſuch a ſtate of debility, and ſo emaciated, that ſhe ſeemed to be threatened with a conſumption. Afterwards theſe unfavourable ſymptoms diſappeared, and for the moſt part ſhe enjoyed good health; but now and then ſhe was afflicted with a pain at her ſtomach, which became ſo troubleſome, that ſhe was adviſed to drink the mineral water of Fir-hill Well, whereby the pain at her ſtomach was ſoon removed, and her health reſtored that ſhe could take any light food. To prevent a return of her complaint, ſhe continues to drink the mineral water, and abſtains from drinking tea immoderately, or too hot, or too ſweet: ſhe has felt nothing of the cardialgia theſe three months. It is to be obſerved, in this lady's caſe, that the mineral

neral water always gave her eaſe, and always ſtaid on her ſtomach, when ſhe brought up every thing elſe.

N. B. It has been often obſerved, that intemperance in tea drinking, and drinking it too hot and too ſweet, accompanied with a ſedentary life, is the general cauſe of ſtomach complaints, of relaxation, and indigeſtion; all which are removed by the tonic and ſtrengthening powers of the mineral water.

## CASE IX.

*Robert Johnſton*, in North Street, near the Meal Market, a full, plethoric man, about fifty; three years ago he was ſeized with a pain, and difficulty of paſſing his urine, which, for the moſt part, was mixed with gravel, of the colour of brick-duſt; ſometimes he would feel a ſtrong preſſure and deſire to paſs his urine, but could make none; at other times he would feel his water dribbling away involuntarily, with a ſharp pain in his loins,—a ſymptom that his kidneys were affected. After trying abundance of things in vain, he applied to a phyſician; by whoſe advice he took a variety of medicines, but without relief. Afterwards he drank large quantities of lime-water and Spaniſh ſoap; from all which he received no benefit nor eaſe. From November to May laſt, that is, during the whole winter, he took no medicines, though in extreme pain and miſery. About the

the beginning of May, he began to drink the mineral water of Fir-hill Well, for an incontinency of urine, with a frequent deſire and exceſſive pain. After uſing the above medical water a few days, he found himſelf conſiderably better; and by continuing the ſame courſe, his complaint became much eaſier; his expreſſion was, "that the water of Fir-hill Well was the only thing that ever gave him eaſe." September ſixth, he begins to drink a double quantity of the mineral water; 12th, he finds himſelf much better; 13th, he finds himſelf ſo much recovered, that he purpoſes going to the well, that he may drink the water at the fountain head; 23d, he walked to the New Pier, and returned, which he had not attempted for ſome years; the night following he was reſtleſs, and felt a return of his old complaints, which he imputed to the fatigue of the preceding day; 29th, he uſes the mineral water in all his meals, and finds himſelf much eaſier: Oct. 9th, he continues to uſe the water as formerly, and finds the uſual benefit; when not uſing too much exerciſe, he is at perfect eaſe.

# LECTURE III.

.....

## LUCUBRATIONS ON MINERAL WATERS IN GENERAL.

IT is not a little ſurpriſing, what ſmall attention is given to Mineral Fountains by moſt of the Faculty; at the ſame time, they muſt be conſcious of many radical cures done by mineral waters, in the moſt obſtinate caſes, after all other means and medication have failed. Being unwilling to indulge many reflections on this head, I ſhall only take upon me to obſerve, that when this branch of medical information is better underſtood, and more generally practiſed, it will be attended with ſingular advantage to the healing art, and no ſmall addition to the honour and dignity of the profeſſion, and to the benefit of ſociety and of mankind at large.

Our acquaintance with mineral fountains is but of modern date, and treated very ſuperficially. Some practitioners, from their ſituation, have had no opportunity of improvement in this branch of medical ſcience; others have treated it with faſtidiouſneſs and contempt, raſhly judging all medical ſprings to be

uſeleſs

uſeleſs and inſignificant, although unqueſtionably intended to preſerve health where it is, and to reſtore it where it is wanting. But if theſe fountains are not impregnated with the powerful ingredients whence health is derived, for what other purpoſes were they deſtined? They are unfit for domeſtic uſes; they will neither anſwer the cook nor the laundreſs; and ſince they are unfit for culinary purpoſes, they muſt have been given and meant for medical, agreeable to the maxim, *Deus et Natura nihil faciunt fruſtra:* therefore medical purpoſes ſeem to have been the original end and deſign of their deſtination; wherein they ſeldom fail, when applied ſcientifically. I was ſorry to find, that Dr. Cadogan, in his celebrated Treatiſe on the Gout, and Nervous Diſeaſes, takes the wrong ſide of the argument, and expreſſes himſelf thus: "The "numerous cures performed by the mineral waters "at Bath, are not owing to the ingredients where-"with the waters are impregnated. 'Tis the water "that cures." Will the elementary fluid cure the ſcrophula, the ſcurvy, the Lepra Græcorum, where the blood and fluids are vitiated, and a morbid diatheſis in the conſtitution? Theſe diſeaſes muſt be removed by a ſpecific quality in the medicinal waters: there is a peculiar deſtination of the water to cure each diſeaſe, and the ſucceſs depends on the propriety of the choice and application. The medical water muſt be adapted to its correſponding malady, otherwiſe

wiſe no cure may be expected. A chalybeate ſpring will never cure a ſcrophulous infection,—each medicinal water having a power to cure its correſponding malady. Thomſon the poet expreſſes himſelf very differently from Dr. Cadogan:

> " But who theſe virtues can declare? Who pierce,
> " With viſion pure, into theſe ſecret ſtores,
> " Of health, and life, and joy?"

Dr. Cadogan having been moſtly employed in regimental practice, had ſcarcely given any attention to the medicinal powers of mineral waters, elſe few could have expreſſed themſelves with more ſagacity, or more ſcientifically, having given ſufficient proof of ſuperior genius in the medical tracts which bear his name.

With reſpect to mineral waters in general, the public, ſome at leaſt, entertain very miſtaken notions, ſuppoſing all mineral ſprings to be much alike; whilſt others are of opinion, that if a medical fountain cure one diſeaſe, it muſt be good in all other diſeaſes: this miſtake proceeds from want of information, that mineral waters are impregnated with different ingredients, whereby they are qualified to cure different diſeaſes. How different is Scarborough Well from Harrowgate? How different is Fir-hill Well from Saint Bernard's or Moffat? in their compoſition, deſtination, and method of cure; yet all agreeing in

one

one particular, namely, a reſtorative and exhilirating quality, eſtabliſhing general health, by their ſalutary effects on the ſtomach and firſt paſſages, and giving an efficacious tone of ſtrength and vigour to the whole ſyſtem.

My opinion being aſked, whether the Spaw Well at Aberdeen was not preferable to Fir-hill Well? They are both generic ſprings of the chalybeate claſs, and the ſame principle; but they are not of equal power and efficacy. Their compoſition is nearly the ſame, with the difference of majus and minus. Fir-hill Well has another advantage, its ſituation being a mile diſtant from Aberdeen; by moderate exerciſe, in pure air, the mineral waters are more efficient, whereby they take the round of the circulation; and being detergent, as well as diuretic, they waſh the urinary paſſages from all impurities of ſand or gravel, which by coheſion may obſtruct their ducts or canals. Being aſked, whether the medical waters will make good tea? None of the medical waters, whether chalybeate, hepatic, or ſaline, will draw tea, or any other infuſion, being already replete and ſaturated with other ingredients: they are altogether unfit for other uſes. By the vulgar, they are called hard waters, and are an improper menſtruum for drawing tea. It is much to be wiſhed, that this Indian ſhrub were not in ſuch high eſteem with the female part of the community; its pernicious effects, when drank to

exceſs,

exceſs, which is often the caſe, have been already hinted at; counteracting the ſalubrious effects of the chalybeate, cauſing a general relaxation and debility of the ſolids, and thereby thinning and attenuating the blood and fluids. The exceſſive uſe of tea is injurious to pregnant women, or nurſes during lactation, in a particular manner; extenuating the human offspring even before they are born; rendering them puiſny and feeble. Are not the faces of our young women, even before puberty, wan and wrinkled by exceſſive tea drinking? How much unlike the roſy colour of health and beauty which animated the looks of their grandmothers, to whom this exotic Indian weed was ſcarcely known!

Many are the inducements which a neighbouring nation has to uſe tea with profuſion; its being a profitable branch of commerce, which they have monopoliſed; they likewiſe find it expedient, to digeſt and dilute the groſs animal food, wherein they very liberally indulge, twice a day, and ſometimes oftener; whereas our food, being of a lighter texture, requires no watery compoſitions, however diſguiſed, to qualify it.

The following caſe will in ſome meaſure confirm the injurious effects of exceſſive tea drinking.

The writer of this narrative attended a lady in London, aged about thirty-five; umarried, temperate in her living, except in the uſe of tea, to which

ſhe

ſhe had been habitually addicted, ſeldom drinking fewer than twenty diſhes of tea daily; whereby ſhe became ſo relaxed, her joints particularly; her under jaw became ſo relaxed, that it dropt out of the articulation, and ſhe became chop-fallen, quite ſpeechleſs, but not in much pain; her greateſt difficulty was in ſwallowing her food; when the luxation was reduced, ſhe was fed from the ſpout of a tea-pot, not with tea, but chicken broth, ſoup, and ſuch like; after two months, the * bandage was removed, and the joint reſtored to its natural function,—being adviſed to reduce her quantity of tea to three diſhes for breakfaſt, and in place of afternoon's tea, ſhe drank a pint (a mutchkin) of porter; whereby ſhe recovered her ſtrength and habit of body inſomuch, that from being a pale, ghaſtly looking ſhadow, ſhe became a remarkably good looking woman.

Exceſſive tea drinking is not only injurious, but becomes more ſo by drinking it too hot, or too ſweet; whence often ariſe a pain and acidity in the ſtomach. If ſugar is infuſed in warm water, and put near the fire, or in the ſun, it ſoon acquires an acidity, and becomes as ſour as vinegar: the heat of the ſtomach produces the ſame effect, and is moſt ſenſibly

* Mr. Benjamin Bell, in his Surgery, ſays no bandage is neceſſary after reducing the lower jaw; but if the luxation is owing to weakneſs and relaxation, as in the preſent caſe, a proper bandage is abſolutely neceſſary.

bly felt by ſuch as follow an idle, ſtudious, or ſedentary way of life. But, after all, if the uſe of tea cannot be diſpenſed with, and by many is accounted among the neceſſaries of life,—let it be brought to ſome regulation, and uſed moderately, accompanied with tea bread, to qualify it; let it be uſed moderately warm, and not ſweet: thus qualified, it becomes more tolerable, and leſs pernicious. If coffee be ſometimes ſubſtitued in place of tea, it will prove a good expedient againſt exceſſive tea drinking. When the pain and acidity in the ſtomach become intolerable, in ſuch a caſe the chalybeate ſpring acts with a ſpecific power, by diluting the acidity, and correcting the ſaburra accumulated in the ſtomach, whence pain, flatulency, and ſour eructations ariſe.

## ON SUGAR.

HAVING concluded my obſervations on exceſſive Tea drinking, I ſhall now ſubjoin a few remarks, without a tedious preamble, on the exceſſive, and therefore dangerous, uſe of Sugar; which is an ingredient inſeparable from tea drinking, although in its conſequences the more pernicious ingredient of the two. Sugar is a concrete ſubſtance, or a factitious ſalt, prepared from the juice of the ſugar cane.

About

About the middle of the laſt century, it was firſt cultivated in Barbadoes, and from thence imported into England. It is ſo pleaſant to the taſte, that it is become an ingredient in moſt articles of our food; and ſo palatable, that by the bare mentioning any thing againſt the uſe of ſugar, one muſt expoſe himſelf to the hazard of incurring the cenſure and diſpleaſure of the public. Unpopular and forbidding as theſe circumſtances may appear, truth, to a candid mind, muſt appear of higher conſideration. That ſugar is a cauſtic and corroſive ſubſtance, is manifeſt; the teeth of all that are accuſtomed to the free and exceſſive uſe of ſugar bear teſtimony. Firſt, it deſtroys the enamel of the teeth; after which the bone of the teeth, being of a ſoft and porous ſubſtance, ſoon decays; becomes caries and rotten; perforated with holes; the patient all the while tormented with the moſt excruciating pain, which nothing will remove, or ſcarcely alleviate, but extraction: of all cures the moſt deteſtable, and often to be repeated. In London, the dentiſt rides in his chariot, but in no other country; where ſugar is uſed more ſparingly, diſeaſes of the teeth are hardly known: even here, among the poor, who by their poverty are debarred from the uſe of ſugar, and ſeldom feel the toothach, while the rich and opulent are perpetually tortured with toothachs and pains of the ſtomach, from the conſtant uſe of that pleaſant but pernicious ſalt. In

confirmation of this doctrine, numerous inſtances might be quoted: not to be tedious, I ſhall only mention the two following. A young man about fourteen, ſeemingly healthy, applied to the writer of this narrative to inſpect his teeth; but they were entirely deſtroyed, and nothing to be ſeen but a row of black ſtumps, buried in the gums ſo deep as to be ſcarce viſible; they looked like dots of ink upon the gums, as if they had been done artificially. Having aſked the young man the cauſe of ſo ſtrange a phenomenon, he ſaid, his father was a lumper or porter upon the quays, daily employed by the merchants in the ſugar trade; that every evening he brought home with him a ſtocking full of brown Muſcovado ſugar, with which the young man had made ſo free, that he had loſt his appetite for any other food,—his teeth all the while, though waſting away, yet giving him very little pain. This young man, in the fourteenth year of his age, would live the remainder of his life without teeth, except the four back teeth, which do not make their appearance before the twenty-ſecond year, and are therefore called *Dentes Sapientiæ*, Wiſe Teeth.—The other inſtance of havock made upon the teeth by the exceſſive uſe of ſugar, is of a child four years old, who had been put out to nurſe, on account of her mother's indiſpoſition. The nurſe being engaged in buſineſs that called her abroad, what they call out-door buſineſs, ſhe left the child alone conſtantly ſit-

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ting in a little chair, having a bar before it to prevent her falling; ſhe likewiſe tied up a ſufficient quantity of brown ſugar in a cloth, for the child to ſuck at until her return,—ſometimes a lapſe of three or four hours. Within ſix months, in place of cutting the remainder of her teeth, thoſe ſhe had already cut, about twelve in number, were totally conſumed, without leaving the ſmalleſt veſtige. Her caſe was not ſo deplorable as the preceding, as he would remain toothleſs during life, but the other at the age of ſeven would cut a freſh ſet of teeth. The deleterious quality of ſugar ariſes from the ingredients wherewith it is prepared and refined; when the cane juice is conveyed into the grandee copper to boil, and to bring it to a concrete ſubſtance or grain, ſeven or eight pounds of unſlacked white lime are added to the liquor, to cleanſe it from its impurities, and to bring it to a grain; but white lime is known to be of a corroſive cauſtic quality; it is ordered in the Diſpenſatories of London and Edinburgh as a potential fire: when applied to the ſkin, its effects on the human body reſemble actual fire, deſtroying the ſkin and teguments; but when in a fluid ſtate, diluted with water, it loſes much of its malignity, yet retains enough to deſtroy the teeth, and to injure the coats of the ſtomach; whence toothachs and pains in the ſtomach proceed. Were it neceſſary, many other arguments might be adduced againſt the profuſe and

exceſſive

exceſſive uſe of tea and ſugar; but as the object of this diſquiſition is meant to ſhow, that theſe alluring articles of our food are not injurious to our health and conſtitutions, unleſs uſed immoderately and without caution; it will be a needleſs and unprofitable labour to endeavour to regulate one of the moſt unruly and irreſiſtible appetites belonging to our ſyſtem.

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## LECTURE IV.

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*Copy of a Letter from Dr. ***, to Mr. Angus, Superintendent of Fir-hill Well.*

SIR,

FROM ſuch trials of the Fir-hill water, as my time would allow me to make, I am of opinion,

1. That it contains a moderate proportion of iron, combined with what is now called ſulphureous acid.
2. A very ſmall quantity of ſulphureous vapour, which is now called hepatic gas.
3. And that it contains very little of any calcarious or chalky earth.
4. The firſt of theſe ingredients, ſulphat of iron, is, by medical people, believed to be a remedy in relaxed

relaxed delicate conſtitutions, particularly in ſeveral diſorders to which females of that deſcription are liable.

5. The ſecond ingredient, hepatic gas, is believed to be a remedy in diſeaſes of the ſkin, in ſcrophulous complaints, and in the rheumatiſm; and being free from calcarious earths, is an excellency in a mineral water, as ſuch a water is much lighter and more wholeſome than one containing any conſiderable quantity of chalky earth.

The Doctor's letter concludes with an injunction, not to inſert it, nor his name, in any periodic publication. Dated 11th October, 1798.

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*Anſwer to the preceding Letter,—to Mr. And. Angus.*

SIR,

SOME two or three weeks ago, I ſent you a ſhort ſketch on the compoſition and qualities of Fir-hill Well; ſoon after you ſent me a letter, addreſſed to you, containing Dr. —— remarks on the ſame ſubject. Our accounts differ conſiderably, but I do not find myſelf diſpoſed to retract in the leaſt from what I formerly wrote you, for the following reaſons, namely, in the firſt article of the Dr.'s letter, he mentions a combination of iron with ſulphur, whereas Fir-hill Well is a pure chalybeate; if

if ſulphur were admitted into the compoſition, it might juſtly be admitted an hepatic, having a fœtid odour, vulgarly called the ſmell of rotten eggs. The ſpecific denomination of an hepatic, is a fountain whoſe water is compounded of a ſulphureous volatile acid, and a caloric or inflammable principle, which correſponds exactly with Moffat and St. Bernard's Wells, both of them notable hepatics; but the water in queſtion is of the chalybeate claſs, having iron for its radical or baſis.

2. In the ſecond article, a ſulphureous vapour is ſaid to exiſt, called hepatic gas; this vapour is by no means hepatic, but purely chalybeate or ferruginous like ſmithy water, but in nowiſe hepatic, or having a fœtid ſmell. The difference between an hepatic and chalybeate gas is very perceptible, the former being fœtid and very diſagreeable, the latter irony, but in nowiſe diſguſting.

3. The third article is frivolous, not affecting the power or efficacy of the mineral water. There is a terreſtrial reſiduum, more or leſs, in all waters, common or medicinal, aerial or rain water not excepted, though unqueſtionably the pureſt elementary fluid of any.

4. In the fourth article, treating of the uſe and utility of our chalybeate, we perfectly agree both in ſentiment and expreſſion.

5. In the fifth article, it is true that hepatic mine-

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ral fountains are a ſpecific remedy in all ſtrumous or ſcrophulous affections, but in aſthmas and rheumatiſms they are found to be injurious. Here I cannot avoid making a ſmall digreſſion, mentioning the ſucceſs of St. Bernard's Well, in the moſt deſperate caſes. Elizabeth Laing, after being ſix times tapped, and diſcharged as incurable from the Infirmary at Edinburgh, by uſing the water of the above mineral, ſhe obtained a perfect cure, and had ſaveral children afterwards. Mary Tweedale, after being tapped and diſcharged the hoſpital, was cured at the above well. The preſent Dr. Robertſon, at the hoſpital of Aberdeen, was an eye-witneſs to William Ferguſon's being tapped at the Infirmary, Edinburgh, and afterwards being diſcharged as incurable. He received a perfect cure by uſing the mineral water of St. Bernard's well. Theſe cures are not within the power of chalybeate mineral waters, which, however, are not deſtitute of ſucceſs in ſuch maladies, as anſwer their ſpecific powers and virtue.

6. The ſixth and laſt article of the Dr.'s letter treats of the gravity of Fir-hill water, which he mentions as from trial. I found the water by an hydrometer to be ſpecifically lighter than common water, by one ounce in a gallon.

After all, the ſynthetic mode of analizing mineral water, has given more ſatisfaction to the public, being more intelligible than the ſpeculative opinions

of

of ſchool-men, who ſeldom agree; by their experiments, the component parts of the mineral water are diſcovered by decompoſition, but ſtill their utility to the public continues unknown, and in obſcurity, leaving the public mind in ſuſpenſe, until relieved by a variety of inſtances, wherein the water has proved ſucceſsful. For this purpoſe, abundance of caſes have been collected, which muſt give a general ſatisfaction; the narrative is taken from the perſons themſelves, who have received a perfect cure by uſing the medical water, and are moſt of them reſpectable people, living in Aberdeen or its vicinity; many of whom had undergone long courſes of medication, which proving fruitleſs, compelled by neceſſity and diſtreſs, they applied to the above mineral fountain of Firhill; drinking the water at the fountain head, and uſing moderate exerciſe in the open air, they generally found immediate eaſe, and at laſt a perfect cure, without one ſingle inſtance of a relapſe. You'll excuſe this long letter, from,

SIR,

Your humble ſervant,

J. T.

Aberdeen, Oct. 18. 1798.

*Mr. Andrew Angus.*

# OF COLD BATHING.

THE Cold Bath, Sea Bathing particularly, is found beneficial and ſalutary in all diſeaſes ariſing from debility and relaxation. It acts as a powerful auxiliary to a courſe of chalybeate mineral waters; both anſwering the ſame intention, namely, to brace up and ſtrengthen the tone of the whole ſyſtem; but muſt not be uſed indiſcriminately, or without ſome degree of caution. The aſthmatic, corpulent, and obſtructed; the hectic, and ſuch as are afflicted with a dry cough and ſtitches, or an inflammatory affection of the lungs; muſt refrain from cold bathing. Where there is plethora, or plenitude of the fluids, the cold bath is not adviſable; but in the diſeaſes of a lax or weak fibre, the practice is warrantable. Children, and delicate women, who have been long in a lingering convaleſcent ſtate, will find great relief from the cold bath; to ſuch its tonic, ſtrengthening power, acts with a ſpecific energy,—giving a ſudden vibration to the whole ſyſtem: a ſudden plunge is more efficacious, than remaining long in the water. When the cold bath is uſed with propriety, a general glow or warmth diffuſes itſelf all over the body; but ſuch as feel chilly and ſhivering when they come out of the water, by ſuch it muſt be diſcontinued, or elſe it

will prove injurious. By this criterion, the ſucceſs of the cold bath may be aſcertained. In a great weakneſs ofcon ſtitution, it may be ſafer to begin with the temperate bath, and proceed gradually to the cold bath, which will have a good effect, when accompanied with moderate exerciſe in the open air, walking, or riding, along with a light nouriſhing diet.

To conclude: It is not meant, by the above animadverſions on tea and ſugar, that theſe agreeble articles are to be diſuſed; it is the abuſe of them that renders them noxious.

N. B. Mineral waters, taken from chalybeate, hepatic, or ſaline fountains, will not retain their medicinal virtues long: when expoſed to the air, they ſoon become vapid and effete: they are beſt drank at the fountain head, accompanied with moderate exerciſe; when carried to any diſtance, the bottles ought to be well ſtopt.

Chalybeate waters, particularly, ſoon loſe their virtue, and in a few days are curdled and mothery; the mineral ingredients ſeparate from the elementary, and it becomes unfit for uſe. The mineral water may be ſaid to undergo a natural decompoſition, in ſuch a caſe.

*Neunham's Opinion of Analyſing Compound Subſtances.*

NEUNHAM, a celebrated chemiſt, has lately obſerved, that the chemical analyſis of compound ſubſtances,

ſtances, whether ſolid or fluid, makes little or no diſcovery of their medical virtues,—as that depends on what they are when in a compound ſtate. Some ingredients are found in ſo ſmall a quantity, that they are totally inactive or inefficient when mixed or compounded. A ſmall quantity of ſulphur is to be found in all chalybeates, yet ſo as not to change the nature or name of the medicinal ſpring, ſo as to affect its influence; or, in other words, ſome ingredients may be accounted pharmaceutical, without imparting to the compound a medicinal quality.

*Boyle's Opinion of Analyſing Solids and Fluids.*

Honourable Mr. BOYLE, whoſe life was a conſtant ſeries of experimental philoſophy, gives repeated cautions not to indulge in ſpeculative opinions, which often are falſe and groundleſs; whereas all ſynthetic reſearches are infallible, ariſing from the teſtimony of thoſe who have either reaped the benefit of a cure, or after repeated trials have proved unſucceſsful. In either caſe, the experiment is obvious, intelligible, and void of deception. This will account for the difference in opinion, which often happens betwixt theſe methods of inquiry, which alone can be decided by repeated experience in the ſynthetic method, which always proves infallible and ſatisfactory, ſilencing all controverſy. Having thus delivered my opinion of inveſting the different ingredients,

dients, wherewith mineral waters are impregnated, the ſynthetic method unqueſtionably deſerves the preference, being *a' poſteriori*, from well grounded experience and obſervation; the other *a' priori*, the effect of theory and hypotheſis; often fallacious, and always uncertain,—the reſult of the analytic, exhibiting the ingredients ſeparately; whereas the natural qualities are very different, when in a combined ſtate, to which they owe their efficacy; to inſtance, in gunpowder, there is no affinity betwixt the ſeparate ſtate of the component parts, namely, ſulphur, nitre, and charcoal; but when combined in due proportion, the reſult is a tremendous exploſion; whereas, by the ſmalleſt error in compoſition, the reſult is a diſagreeable phizzing, or a childiſh cracking. Thus it is in all compoſitions, where the combination cannot be diſtinctly aſcertained. Let this ſerve as a caveat againſt all counterfeit compoſitions, which are now ſo common, although eaſily detected, particularly in the pneumatic practice, at preſent in great vogue; but will moſt aſſuredly ſoon ſhare the fate of tar water, wherewith the public was once greatly infatuated.

FINIS.

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